SWOT - Analysis

Strengths

- Occurrence of geosites with world-wide relevance
- Very good geological knowledge of all inventory
- Funded scientists good! They advance knowledge and agencies don't have to pay
- Great stories and opportunities to engage the public
- World leading practice
- Fantastic geology landscapes
- Many pockets of geological heritage sites, museums, parks, monuments

Weaknesses

- Need robust inventory of potential NNL and geosites, there needs to be derived from 1st principles and could develop into partnership with academia – look at field trip sites
- Lack of coordinating/ partnering across organizations
- Lack of syncracy and coordination
- Lack of geologic heritage underpinnings in environmental laws and regulations
- Is there a strategy in or among museums for preserving geodiversity of modern history of geoscience (collaboration with academia for specimens)?
- Comparable (similar) commitment on the part of the various partners in a geoheritage project is needed if not, the project will falter
- While we have a strong group of paleontologists building the importance of preserving sites through outreach and museums we don't have a similar group of mineralogists, petrologists, structural geologists. We need to build out from gem and mineral exhibits
- Coordination and communications within and between agencies involved with managing, protecting, conserving, features of geologic heritage
- Geology not linked or viewed as part of landscapes and natural sciences
- Staff does not have appropriate background or knowledge of site
- Gaps in knowledge of geologic resource, need for research
- Need to keep geoheritage designation simple, speedy, and understandable
- Overlapping geoheritage and other (NNL, Park, Monument) designations could make geoheritage seem irrelevant, even within agencies
- Lack of common standards
- Network and define: partners – 1.meet and get on the same page 2. Mission statement, 3. Build new system without hurting existing efforts.

- Preaching to the choir? Need support of a broader community of advocates
- We need an inventory of site specific programs for teachers a website that disseminates info on these programs NAGT could help with this
- The term geoheritage is not immediately understandable by the average citizen, the term geodiversity is even less innately understood sounds a bit elite-ist and, therefore, not very accessible
- Public needs to care, they need a story with a hero, problem, and a solution. We cannot make this effort too science-y or the public won't care
- Streamline, speed-up and simplify federal permit and report process
- Insufficient Earth Science education in US high schools

Opportunities:

- Insufficient Earth Science education in US high schools
- Big Picture: opportunity to integrate geology, biology and interactions through place paced science education
- Capitalize on NNL designation to establish geosites
- Increasing worldwide recognition about geoconservation
- Use and adapt methodology already used in other countries
- Interagency/Interdisciplinary: opportunity to bring multiple agencies, institutions, and scientific disciplines together to collaborate.
- Learn from European and Asian Geoheritage programs and initiatives
- International connections and exchanges
- Identify rock sample locations that are dominant in rock and mineral collections as mechanisms for identifying geosites (NNLs, paleo program parallel
- Establish common protocols and procedures, methods of grading, for inventories of geologic heritage sites
- "American National Geoparks"
- Link with National Geographic Geotourism online map project
- Cross agency coordination/use/publicity of Research Natural Areas
- Collaboration among different partners synergism
- Also include new types of partners (like mining companies)
- Create "American Geoheritage Areas" designation standards and processes and budgets. Feds, states, counties, private lands, and waters can all have "AGA" designation
- Goal of the new AGA program, convey to the public the value of these areas
- Internationalize – national register of geoheritage sites/district, geoheritage landscape program
- Links between geosites and aboriginal sacred sites
- Develop criteria and strategies to identify and designate GH sites
- Development

- Erosion
- Wildfires
- Link local communities with features in their area and the scientists who study them
- USGS geological and ecological science links
- Geological and paleontological literature available from scientific community
- Local communities and politicians
- Use NNL program as a model for GH program, broaden it to larger sites
- Partnerships between museums and site managers to help preserve and resource and interpret it
- Positive links to mining and extractives and responsible practice
- Use social media to promote GH
- Periodic public geology site, meetings/conferences/awards – national/regional/state/local
- Make use of and nurture local geological societies as: site stewards, educator/outreach, advocacy
- Broader and consistent use of special designations (similar to cultural resource designation)
- ID key partners from workshop participants, leverage skills
- Find champions within the organizations so they push things along within their groups
- Connect to existing initiatives in education, recreation, kids in outdoor programs, etc.
- Link museums, natural sites together into trails a la linking between museum sites on Lewis and Clark with travel guides
- Increase people's awareness of the origins and dynamic past and future of the place they live
- Encourage museums to have more voice in use of specimens and replicas for exhibits, etc.
- Consider highlighting Geopoints of interest, not only natural disasters (Mt ST Helens) but human geoproblems. ie. Summitville mining and what not to do.
- Have capability to take advantage of geoevents and expand upon them as a teachable geomoment like the snowmastadon at Snowmass
- Human beings need connections to place, to landscape, and to the Earth

Threats:

- Political headwinds, lack of funding because we did not make our case strong enough
- NPS NNL program lost 50% of funding in 2005/2006, limited resources
- Losses of unprotected sites
- Lack of scientific education/awareness by the policy makers
- Many agencies working with potential geosites, difficult dialogue
- Absence of academic training programs in geoheritage and geoconservation
- Finding funding
- Funding agencies not familiar with this type of project, need to educate them
- Going off message on relation with extractive industries
- Limited budget, limited time, participants already over-subscribed

- Geoheritage is viewed as a government imposed program or taking of local control, resources, and private property rights
- Don’t restrict educational groups from access to public land, don’t charge or create bureaucratic blocks
- Anti-UN sentiment among elected officials
- Get agency field managers involved, get on their radar screen and find small ways to stay there
- Bureaucracy in permits and reports too cumbersome
- UN Phobia
- Ignorance and apathy
- Fears that geoheritage area designations will cost money, affect property rights, threaten gun rights, etc.
- Lack of public and academic awareness concerning geoconservation